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Title: MDA B Characterization and Remediation Geospatial
Materials for Portage, Inc. External Marketing

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Portage, Inc.

MDA B Characterization and
Remediation Geospatial Materials for
Portage, Inc. External Marketing

Abstract

Portage is requesting LANL review and approval of the following images and figures generated during the course of the Technical Area 21, Material Disposal Area B Landfill Characterization and Remediation (2008-2011); Portage would like to use these materials for company marketing documents such as statements of qualification, presentations, brochures, etc. These marketing efforts are intended to include clients outside of Los Alamos National Security and its subcontractors.

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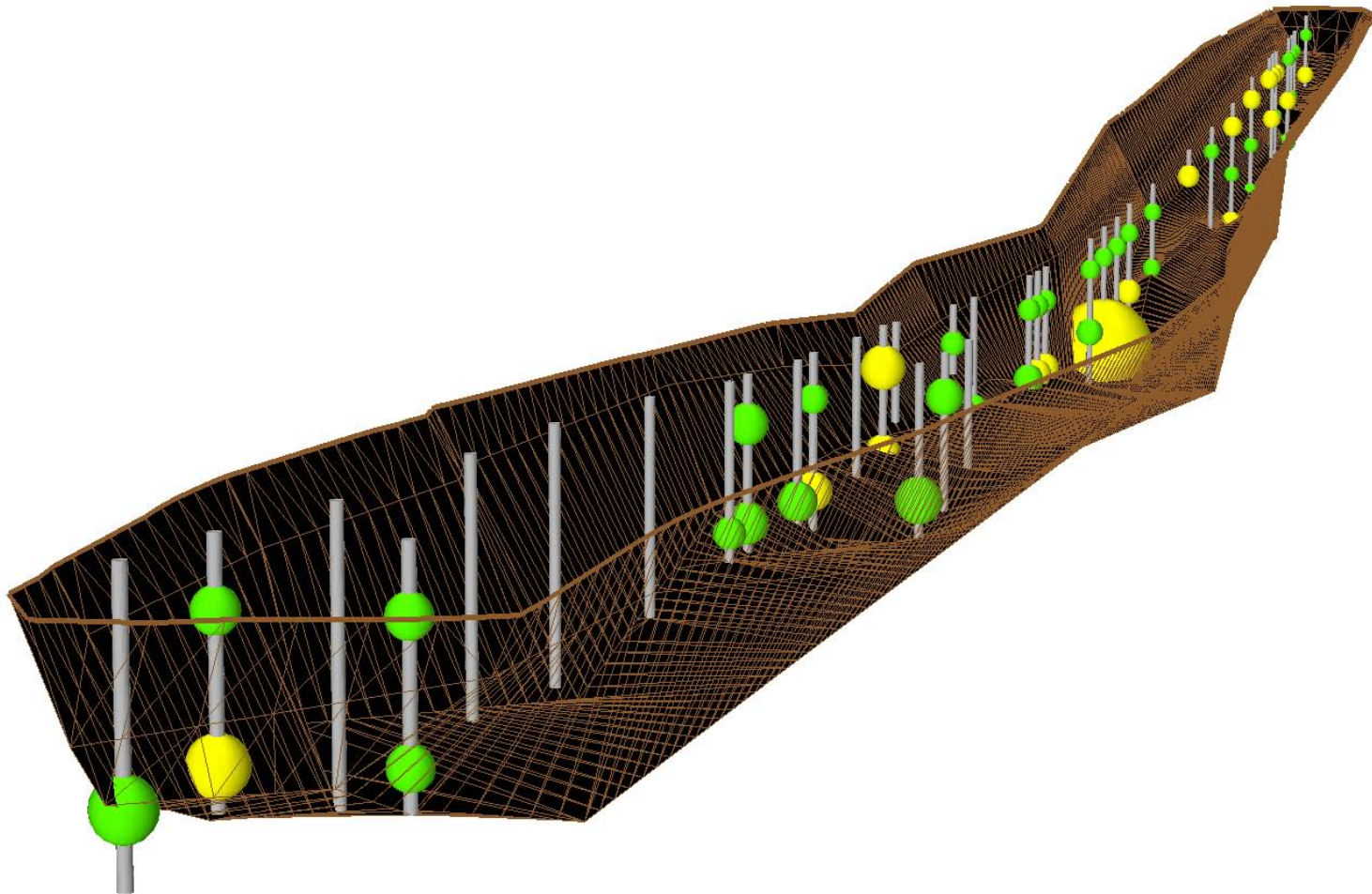


Fig. 1 Plutonium detects and magnitude at direct push locations sampled during 2009 MDA B characterization activities (shown with preliminary trench model).

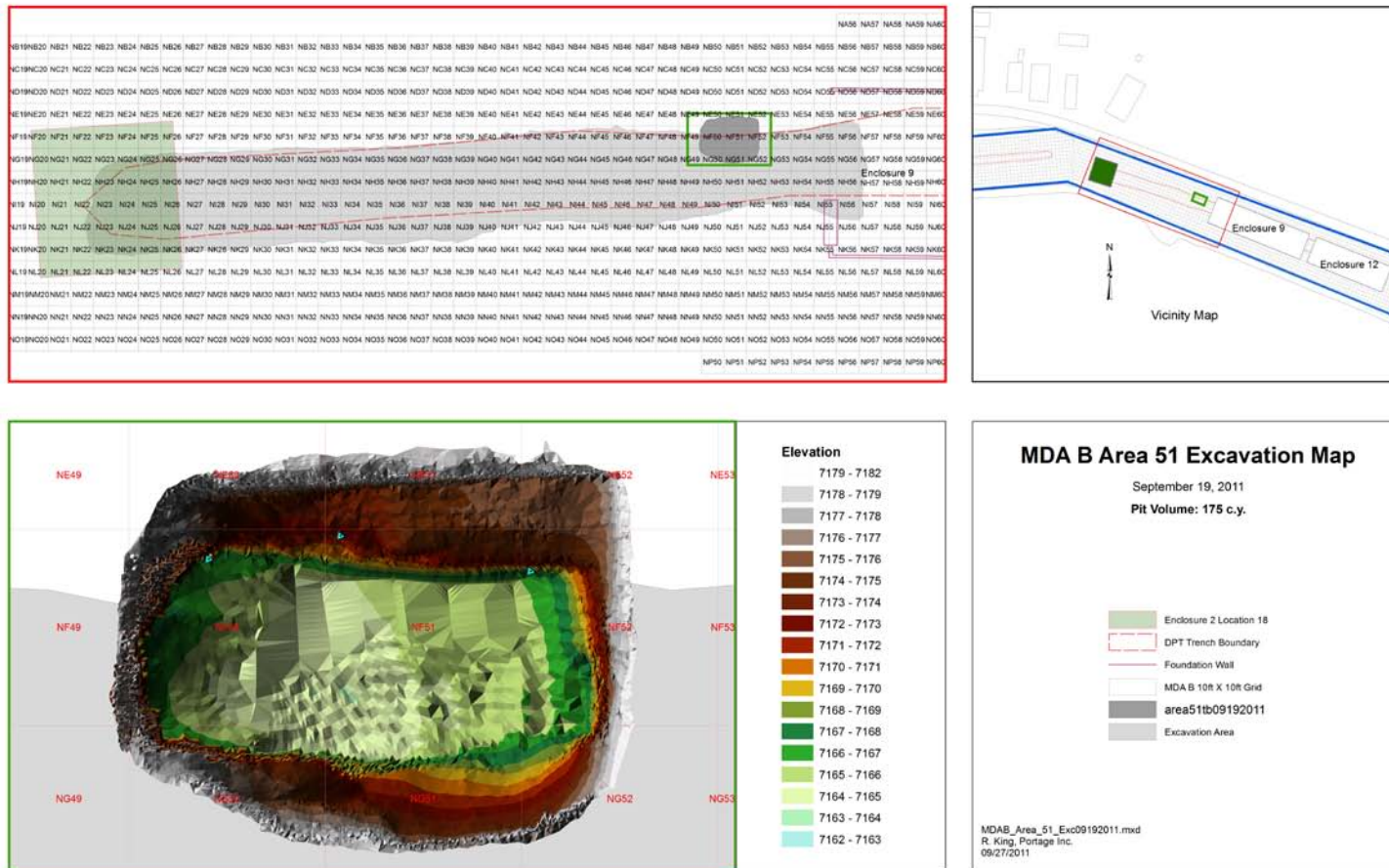


Fig. 2 Area 51 excavation map detailing the mobile enclosure position, a triangulated irregular network of the trench captured using terrestrial LiDAR, the trench's position within the 10' x 10' project reference grid, and trench volume.

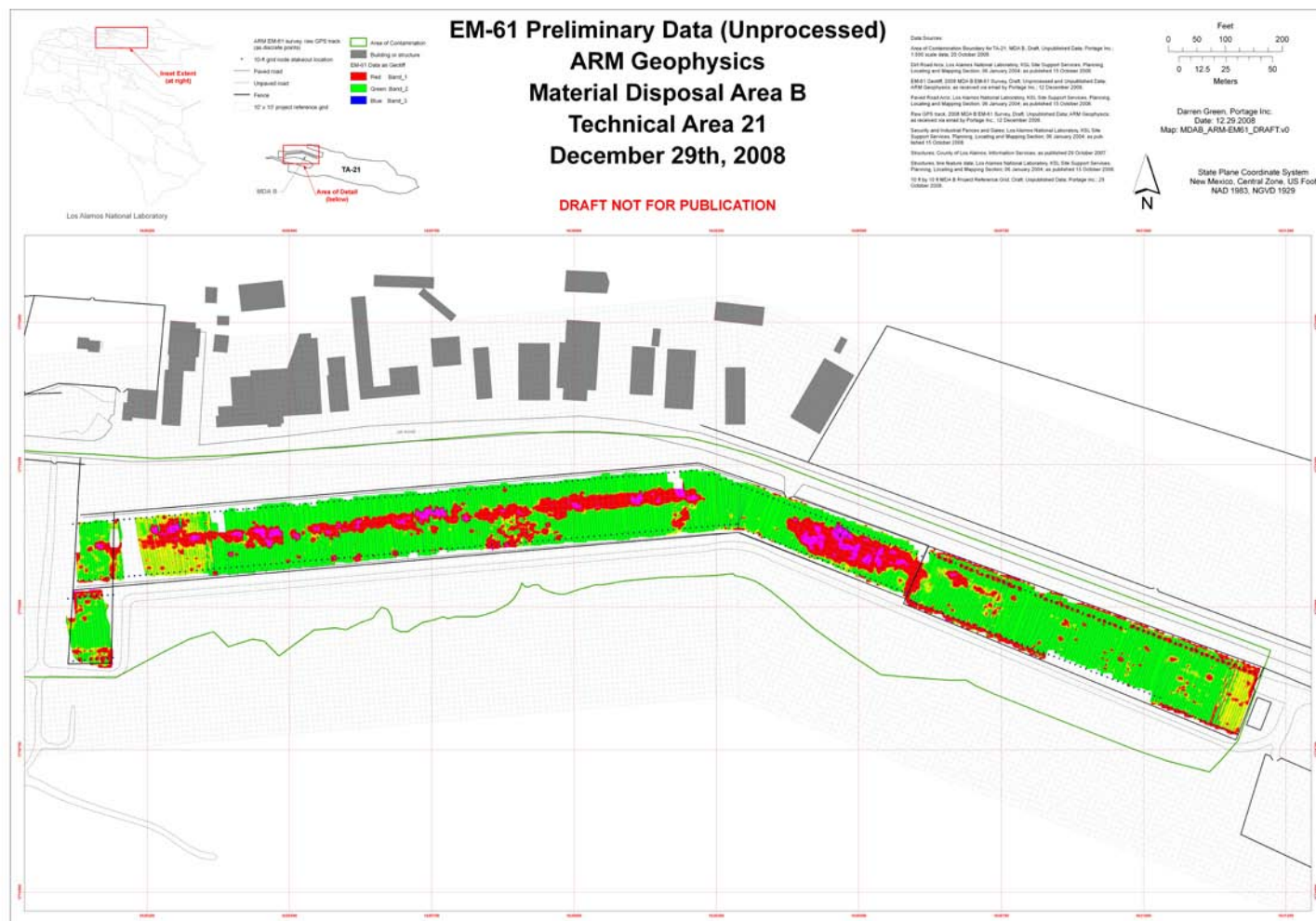


Fig. 3 GPS track of geophysical survey instrumentation and geophysical anomalies at MDA B, as identified using EM-61 technology in winter 2008.

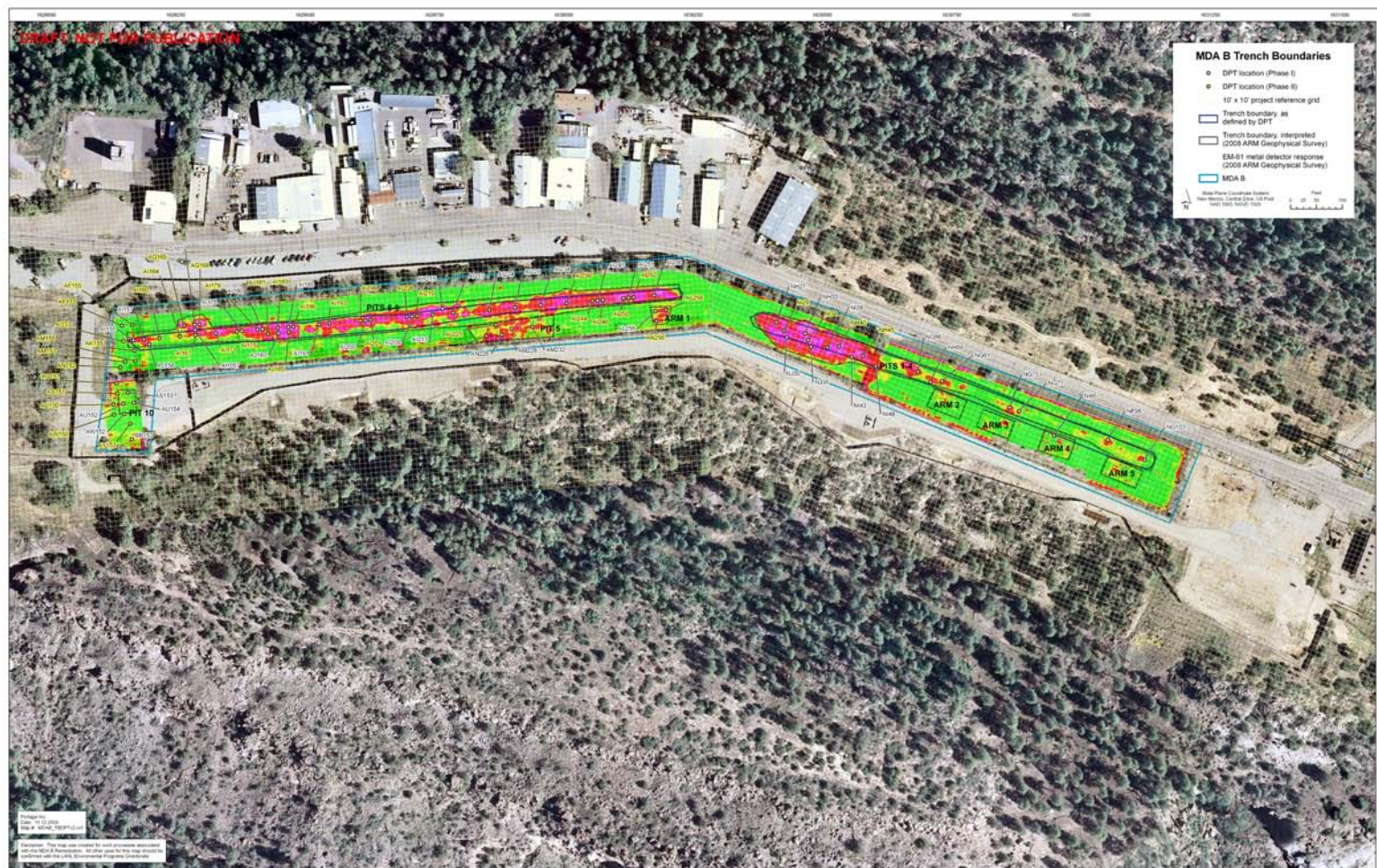


Fig. 4 Direct Push boring locations (2009) shown with results of EM-61 geophysical survey and interpreted trench boundaries.

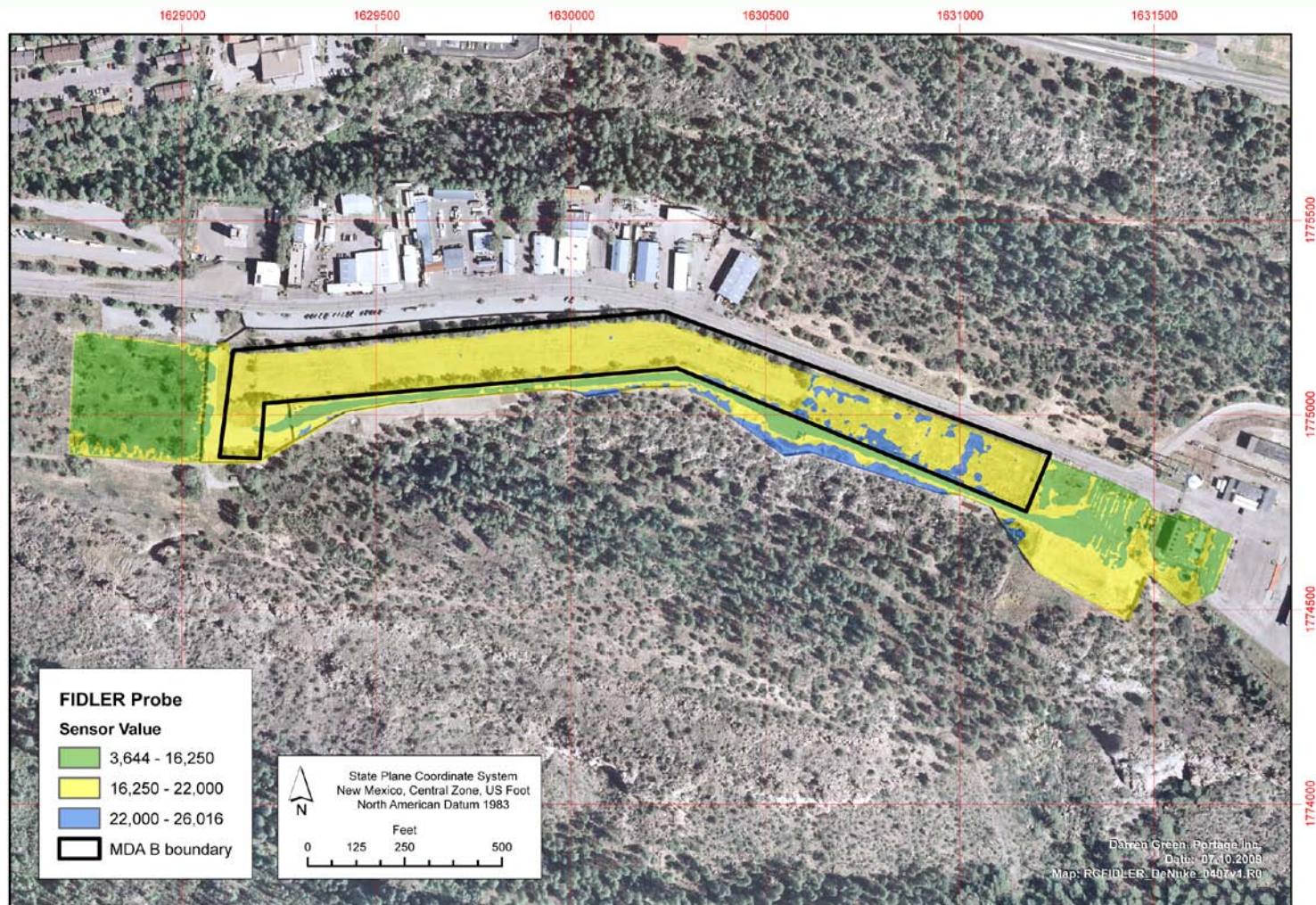


Fig. 5 Scintillation probe sensor values captured during radiological survey across MDA B, performed for site characterization in 2009.

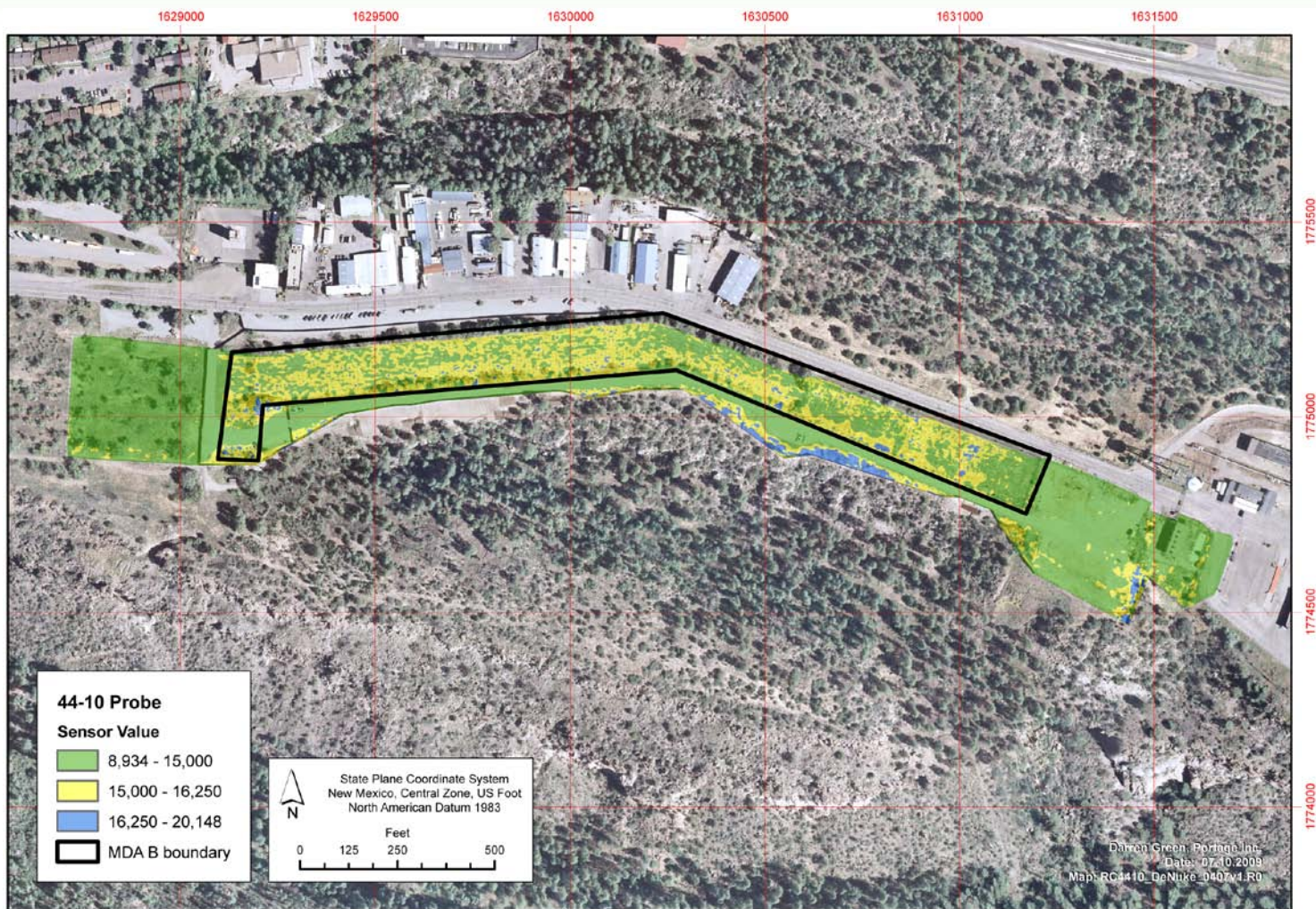


Fig. 6 Scintillation probe sensor values captured during radiological survey across MDA B, performed for site characterization in 2009.

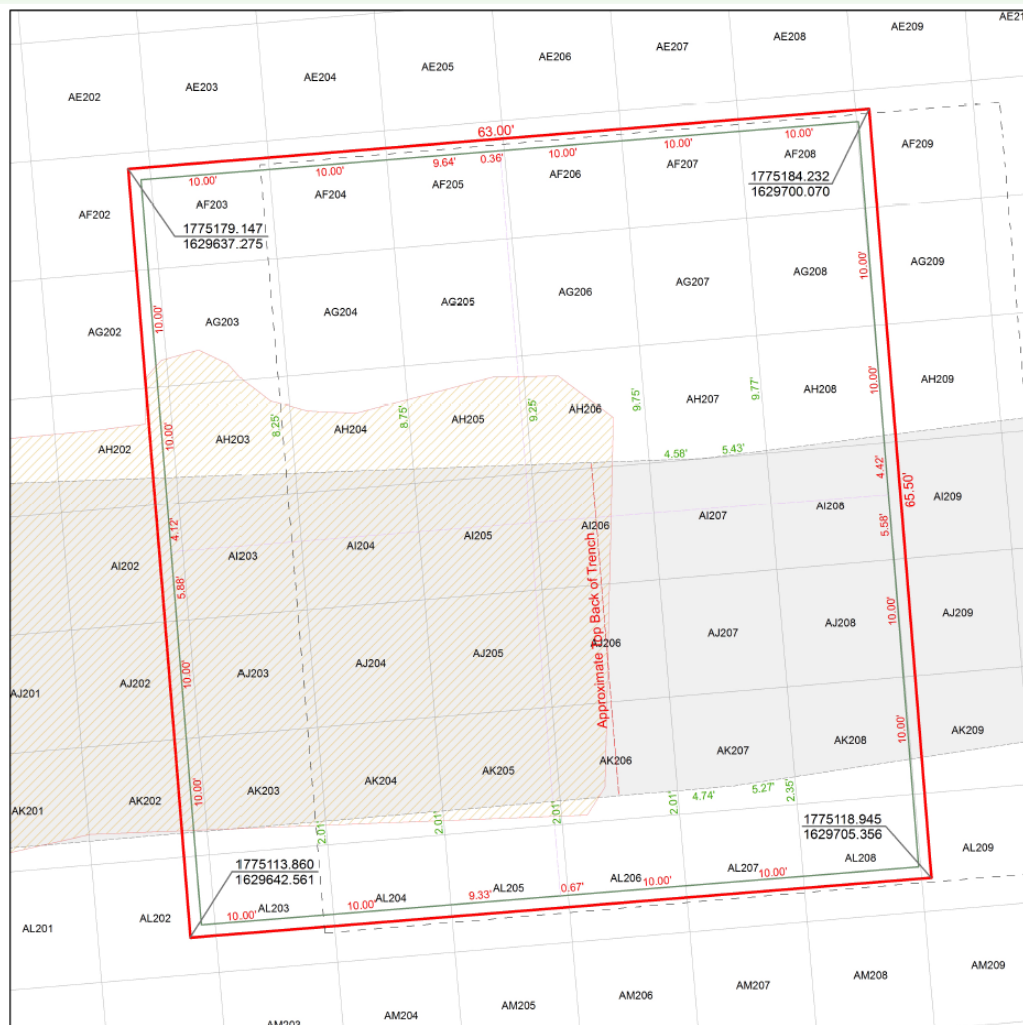
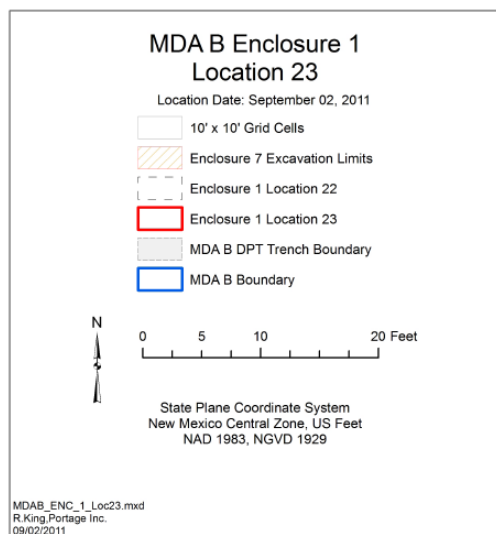
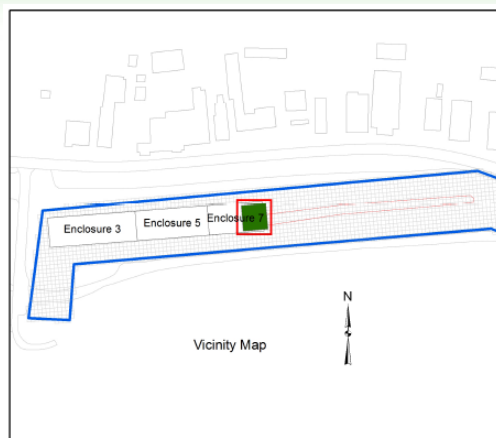


Fig. 7 Excavation map detailing the mobile enclosure position and the limits of the leading edge of the excavation within Enclosure 7, the trench's position within the 10' x 10' project reference grid, and trench volume.

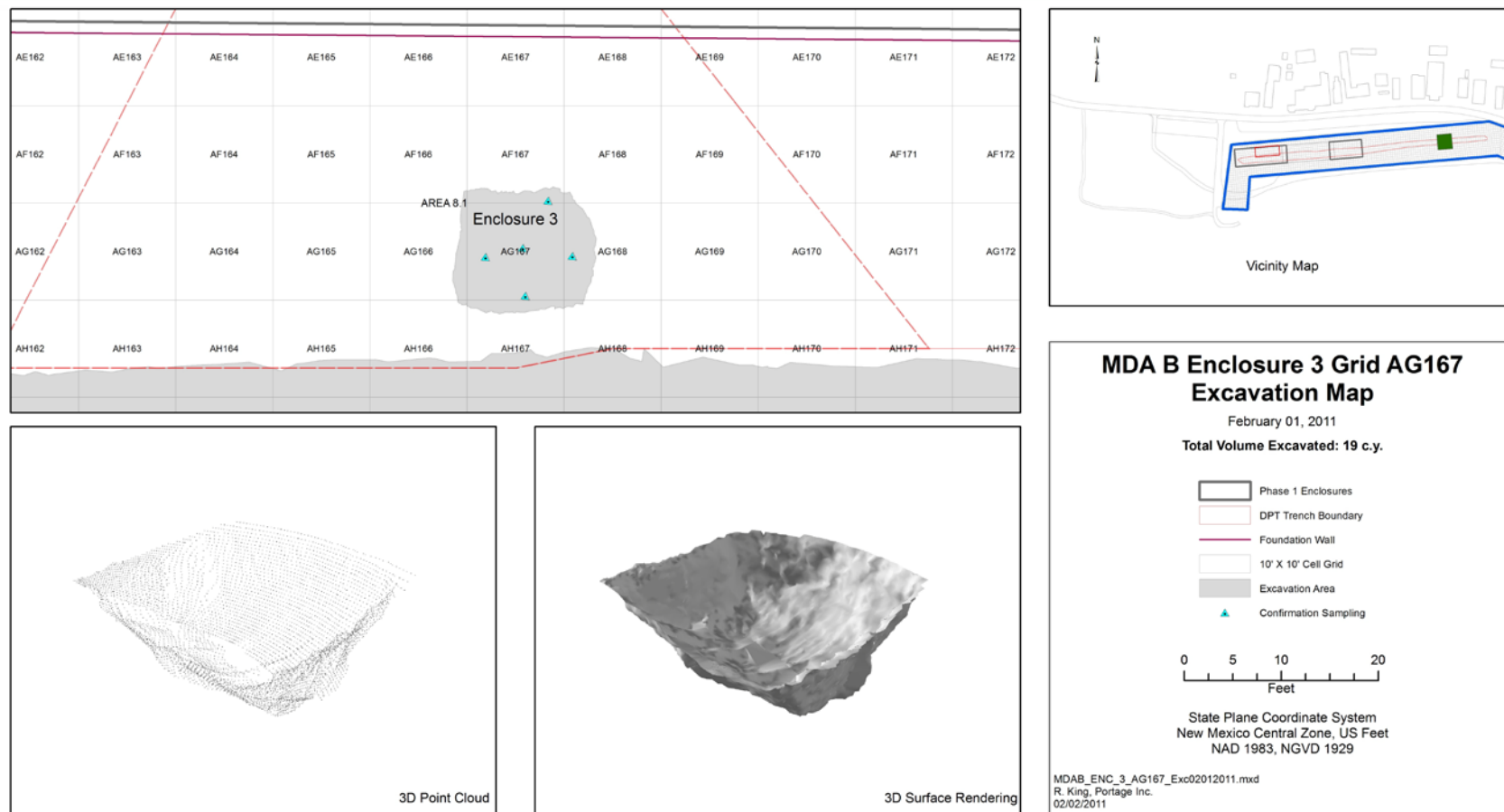


Fig. 8 Excavation map detailing the small excavation on the north side of the trench within Enclosure 3, the trench's position within the 10' x 10' project reference grid, and the point cloud and resulting trench model generated from spatial imaging with terrestrial LiDAR.

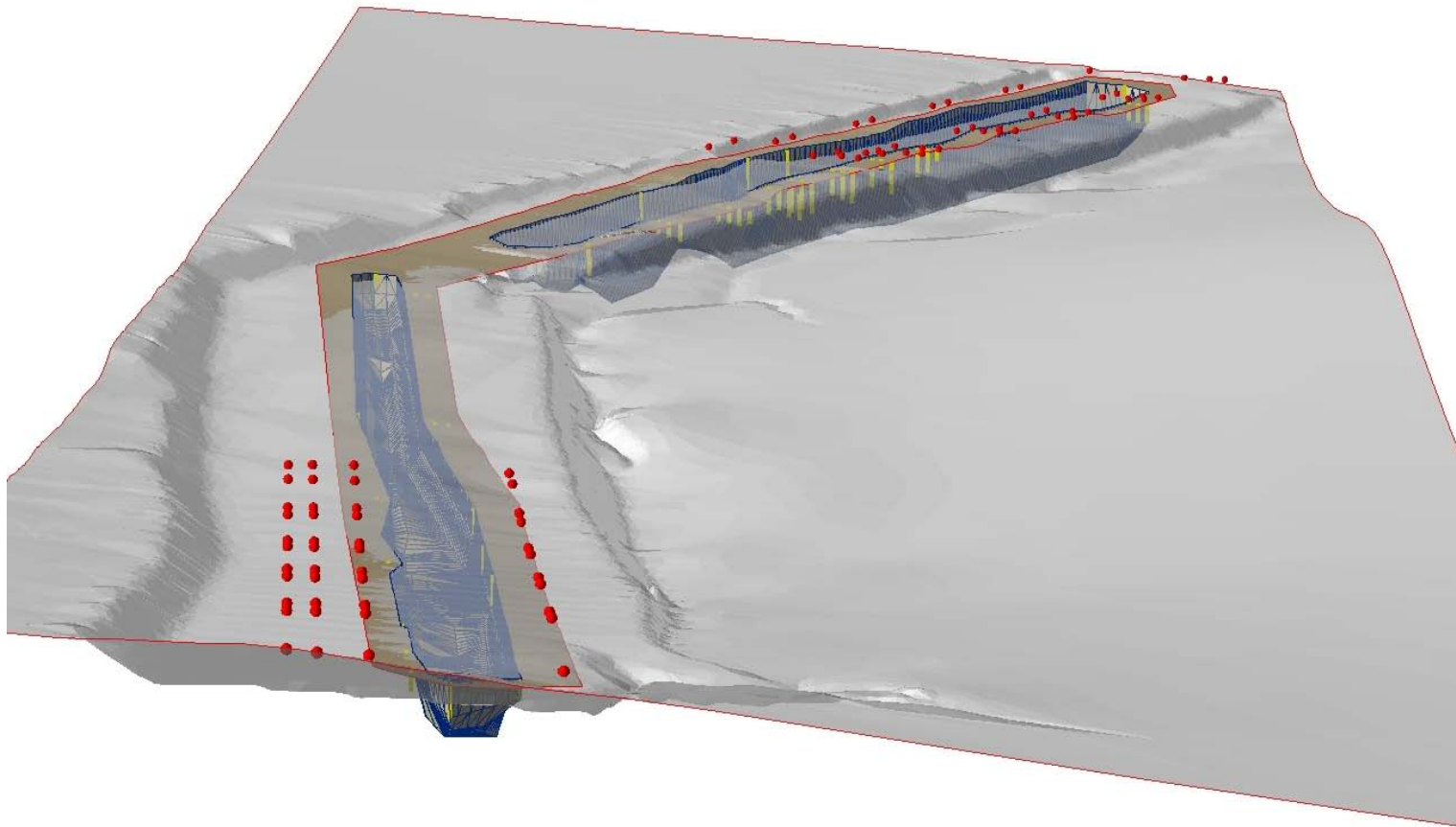


Fig. 9 Early MDA B site visualization showing site topography, fixed enclosure pier locations, direct push sampling locations, and preliminary trench models generated from direct push results and the 2008 geophysical investigation.

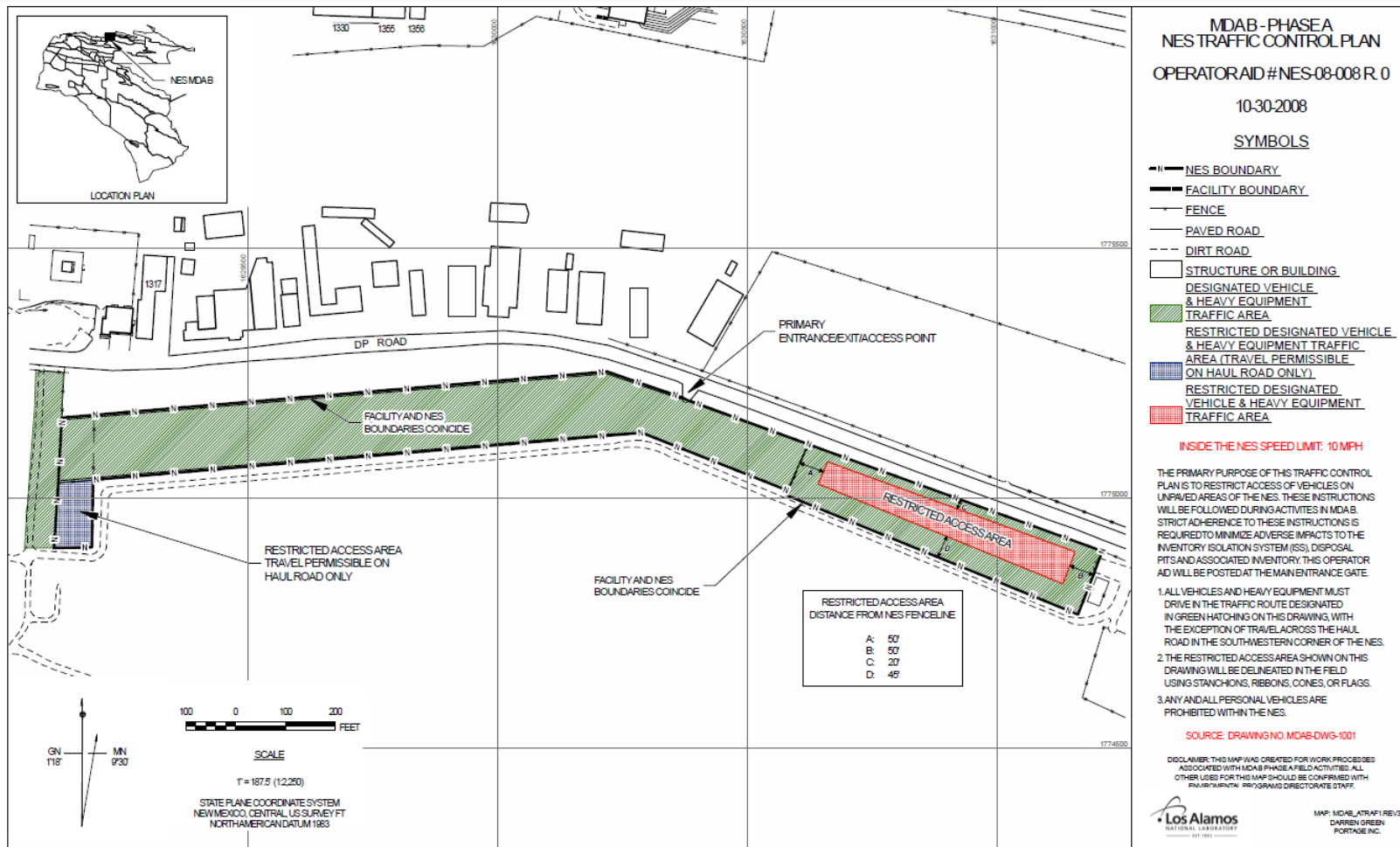
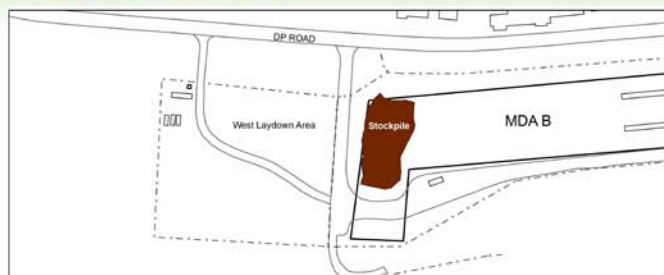
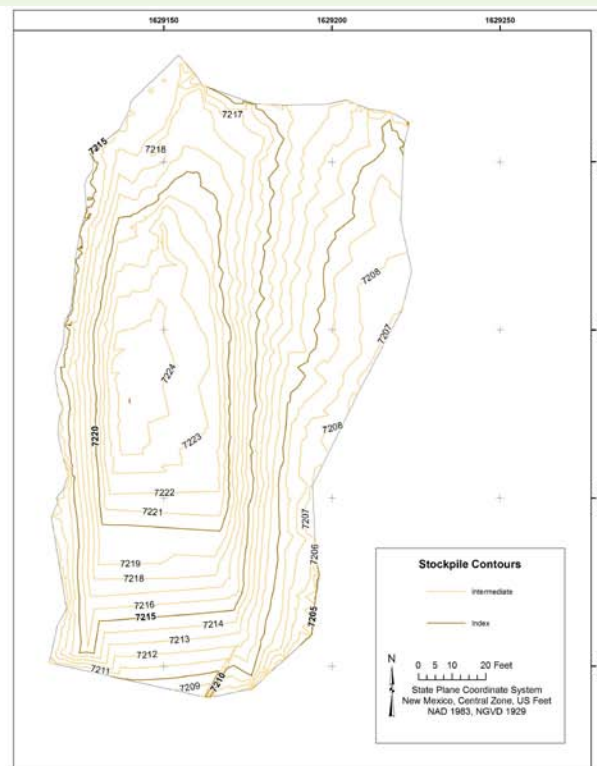
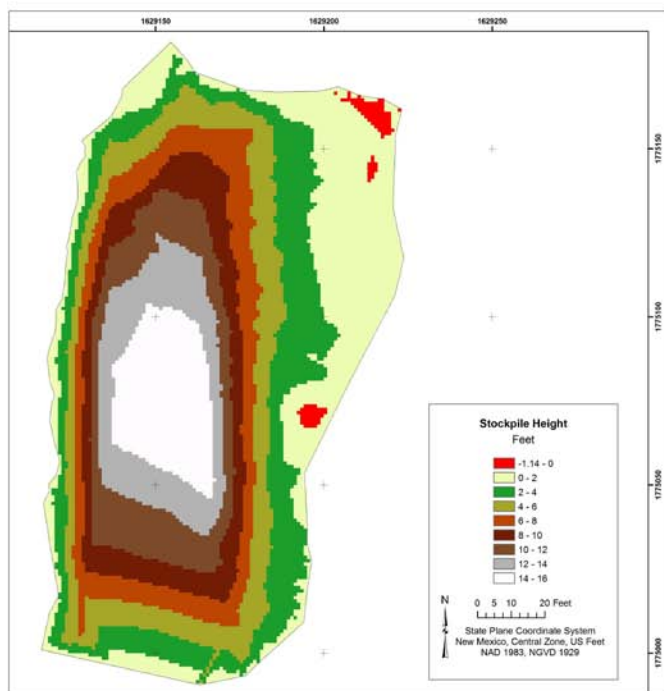


Fig. 10 Phase A (site characterization activities) Traffic Control Plan for the Nuclear Environmental Site at MDA B, generated by Portage in October 2008.



Vicinity Map



MDA B Excavation Areas 9 10 Overburden Stockpile

Stockpile Volume: 3581 cu. yds.

Overburden Stockpile is to be moved,
added and sampled to the existing
stockpile in the West Laydown Area

R. King, P. Garcia - 04/16/2010

Fig. 11 Stockpile map detailing the location of the overburden stockpile for Excavation Areas 9 and 10 and its morphology and volume.

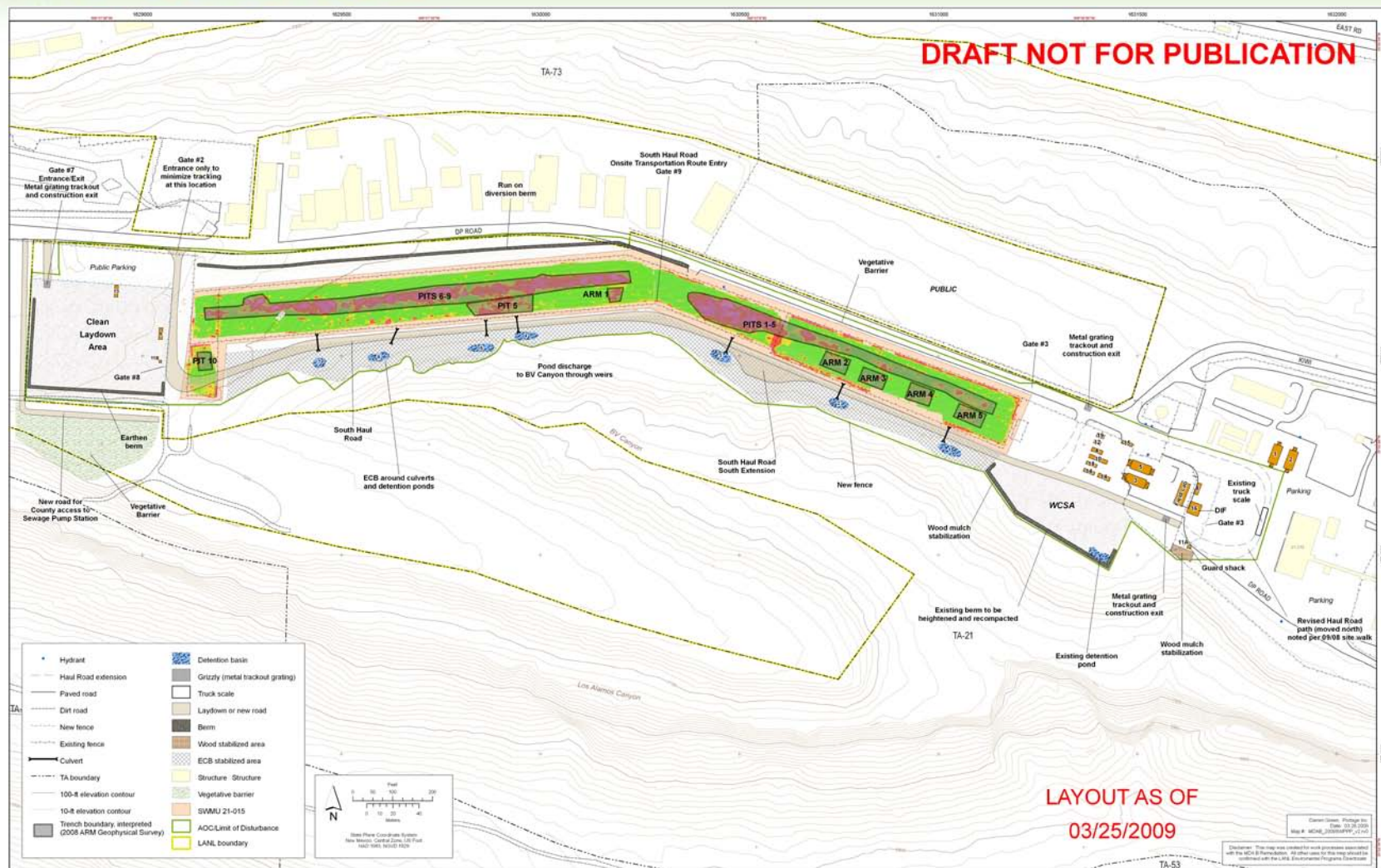
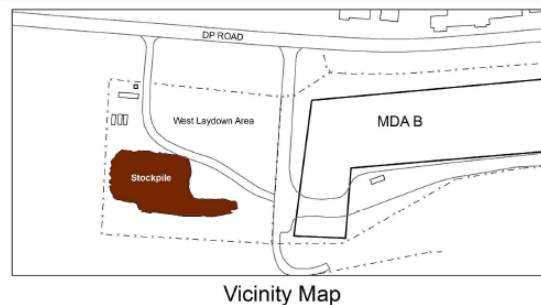
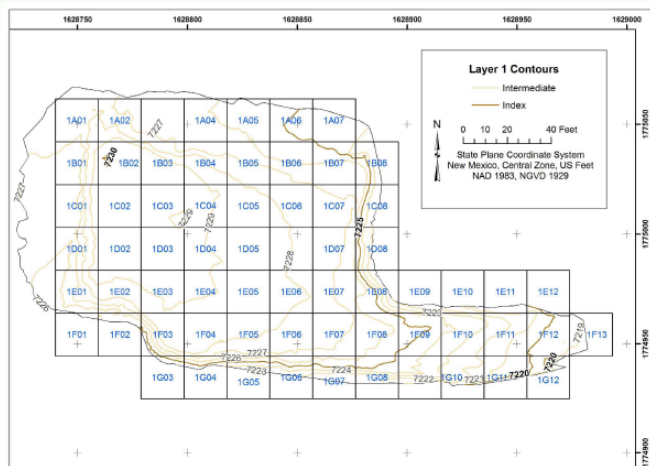


Fig. 12 Detailed site map, continuously updated during dynamic characterization activities to facilitate Stormwater Pollution Prevention Plan development.



Layer 1 Sampling Locations

CELL_ID	SAMPLED	NORTHING	EASTING	ELEVATION
1A01	NO	1775051.75	1628749.75	7227.16
1A02	YES	1775051.75	1628769.25	7227.35
1A03	NO	1775051.75	1628789.75	7228.41
1A04	YES	1775051.75	1628809.25	7228.50
1A05	NO	1775051.75	1628829.75	7228.43
1A06	NO	1775051.75	1628849.25	7228.97
1A07	NO	1775051.75	1628869.75	7228.50
1B01	NO	1775051.75	1628889.25	7228.77
1B02	YES	1775051.75	1628909.75	7228.68
1B03	YES	1775051.75	1628929.25	7228.11
1B04	YES	1775051.75	1628949.75	7228.48
1B05	YES	1775051.75	1628969.25	7228.96
1B06	YES	1775051.75	1628989.75	7228.08
1B07	YES	1775051.75	1629009.25	7228.10
1B08	NO	1775051.75	1629029.75	7228.54
1C01	YES	1775051.75	1629049.25	7227.91
1C02	YES	1775051.75	1629069.75	7228.55
1C03	YES	1775051.75	1629089.25	7228.21
1C04	YES	1775051.75	1629109.75	7228.10
1C05	YES	1775051.75	1629129.25	7228.54
1C06	YES	1775051.75	1629149.75	7227.52
1C07	YES	1775051.75	1629169.25	7227.18
1C08	NO	1775051.75	1629189.75	7223.11
1D01	YES	1774993.25	1628749.75	7228.83
1D02	YES	1774993.25	1628769.25	7229.44
1D03	YES	1774993.25	1628789.75	7229.41
1D04	YES	1774993.25	1628809.25	7229.02
1D05	YES	1774993.25	1628829.75	7229.50
1D06	YES	1774993.25	1628849.75	7229.01
1D07	YES	1774993.25	1628869.25	7227.05
1D08	NO	1774993.25	1628889.75	7227.79
1E01	YES	1774935.75	1628749.75	7227.30
1E02	YES	1774935.75	1628769.25	7228.48
1E03	YES	1774935.75	1628789.75	7228.12
1E04	YES	1774935.75	1628809.25	7228.04
1E05	YES	1774935.75	1628829.75	7228.79
1E06	YES	1774935.75	1628849.25	7228.34
1E07	YES	1774935.75	1628869.75	7228.05
1E08	NO	1774935.75	1628889.25	7221.74
1E09	NO	1774935.75	1628909.75	7221.18
1E10	NO	1774935.75	1628929.25	7221.83
1E11	NO	1774935.75	1628949.75	7219.99
1E12	NO	1774935.75	1628969.25	7225.35
1F01	NO	1774877.75	1628749.75	7225.15
1F02	NO	1774877.75	1628769.25	7225.15
1F03	YES	1774877.75	1628789.75	7225.38
1F04	YES	1774877.75	1628809.25	7228.37
1F05	YES	1774877.75	1628829.75	7228.08
1F06	YES	1774877.75	1628849.25	7227.48
1F07	YES	1774877.75	1628869.75	7227.40
1F08	YES	1774877.75	1628889.25	7227.40
1F09	YES	1774877.75	1628909.75	7225.08
1F10	YES	1774877.75	1628929.25	7223.39
1F11	YES	1774877.75	1628949.75	7221.67
1F12	YES	1774877.75	1628969.25	7219.76
1F13	NO	1774877.75	1628989.75	7218.69
1G01	NO	1774819.75	1628749.75	7224.41
1G02	NO	1774819.75	1628769.25	7224.01
1G03	NO	1774819.75	1628789.75	7223.05
1G04	NO	1774819.75	1628809.25	7223.14
1G05	YES	1774819.75	1628829.75	7222.24
1G06	YES	1774819.75	1628849.25	7222.51
1G07	YES	1774819.75	1628869.75	7222.21
1G08	YES	1774819.75	1628889.25	7222.21
1G09	YES	1774819.75	1628909.75	7219.99
1G10	YES	1774819.75	1628929.25	7219.99
1G11	YES	1774819.75	1628949.75	7219.99
1G12	NO	1774819.75	1628969.25	7218.45

MDA B West Laydown Area Stockpile Sampling - Layer 1

Average Depth: 3.5'
Cell Size: 19.5' X 19.5'
Layer Volume: 1935 cu. yds.
No. of Samples Taken: 45
Stockpile Volume: 1935 cu. yds.

Fig. 13 West Laydown Area stockpile sampling map detailing the stockpile location, its position within the 10' x 10' project reference grid, sampling location coordinates, and stockpile morphology and volume.